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UNDERGROUND INJECTION CONTROL PROGRAM

COMPLIANCE STRATEGY FOR

PRIMACY AND DIRECT IMPLEMENTATION JURISDICTIONS

INTERIM FINAL STRATEGY

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UIC COMPLIANCE STRATEGY

EXECUTIVE SUMMARY

The UIC program's compliance and enforcement efforts have developed rapidly over the past few years and now are on an equivalent level with other mature Agency programs under the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act and Federal Insecticide and Rodenticide Act. This rapid development is evidenced by the completion of a successful UIC Enforcement Initiative in FY 1986 which resulted in the submission of ten civil litigation reports to Headquarters; the first criminal indictment being obtained against a Class II well owner in February 1987; the development and implementation of a definition of Significant Noncompliance (SNC) in FY 1986 and 1987; the development and implementation of procedures for issuance of Administrative Orders (AOs) for compliance or penalties or both under the new authority provided by the 1986 Amendments to the Safe Drinking Water Act (SDWA); and the modification to national reporting requirements to track quarterly compliance of SNC for all well classes.

The UIC program has made great strides in the area of compliance and enforcement, but there is still much work to be done. The purpose of the UIC Compliance Strategy is to continue the compliance and enforcement momentum already generated and to build on this sound foundation over the next five years to achieve a high rate of voluntary compliance by the regulated community. The Strategy is being issued as an interim document, subject to review and issuance in final form after review of the first year of implementation in FY 1988.

The Strategy will serve as an "umbrella" document for future guidance documents covering inspections, compliance monitoring, data management and enforcement response to UIC violations. The Strategy defines the major compliance management policies, guidance, and procedures for implementing the compliance and enforcement aspects of the UIC program over the next five years. It incorporates the new enforcement authorities provided by the 1986 Amendments to the SDWA and mirrors the organization and thrusts in the Agency's Strategy Framework. Each section discusses the status of the existing program, presents problem areas, and outlines how we plan to improve on existing performance.

The Strategy replaces the prior UIC Compliance Strategy for Direct Implementation Jurisdictions. The new Strategy covers all classes of wells for both State and Federal Direct Implementation (DI) programs. Like the earlier strategy, it emphasizes use of a broad array of compliance and enforcement tools to achieve effective owner/operator compliance with current requirements. The Strategy has several significant new features and program initiatives:

Compliance Promotion

- The Strategy promotes proactive State/Regional efforts to target members of the regulated community that require extra assistance to achieve compliance.

Compliance Monitoring

- The Strategy establishes consistent inspection priorities based on program needs, but allows flexibility to address specific State/Regional problem areas.

- The Strategy stresses the importance of conducting inspections in such a manner that the information collected may be introduced as evidence in any subsequent administrative or judicial enforcement proceeding.

Enforcement Response

- The Strategy integrates the new definition and reporting of significant noncompliance (SNC) with the traditional escalated response to all violations.

- The Strategy encourages States to adopt penalty policies which incorporate the basic principles of EPA's policy, i.e., recoup economic benefit, add a gravity component and make any necessary adjustments.

Coordination With Other Federal Agencies

- The Strategy emphasizes the need for inter and intra Agency coordination to protect ground-water resources from contamination. Especially critical is the relationship among RCRA, CERCLA, CWA and SDWA programs.

The UIC Compliance Strategy focuses on present State and Federal UIC compliance and enforcement programs and builds on their programs for future program needs. It recognizes the flexibility built into the regulatory program and the unique features of individual State programs. The Strategy is intended

to serve as a starting point and encouragement for pursuing innovative approaches to compliance. What works well in one State or Region may not be effective in another. The Strategy recognizes that a State or Region with only Class V wells, obviously has different priorities from one with Class I, II or III wells and allows the flexibility to deal with this difference. Additional guidance will be issued to address compliance and enforcement problems that arise in implementing the Strategy.

The Strategy will be implemented in FY 1988 through the Agency Operating Guidance, SPMS, and the Office of Water Accountability System (OWAS). Any changes from current practices are highlighted in the annual guidance packages. States and Regions do not necessarily have to prepare new stand alone Strategy documents, although evidence of implementation should be in Regional operating plans and State program grant work plans. The effectiveness of the Strategy will be measured primarily through improved compliance. Implementation of this Strategy will be evaluated during the FY 1988 mid-year reviews.

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I. PURPOSE AND USE OF STRATEGY

A. Purpose and Use

The purpose of the UIC Compliance Strategy is to define the major compliance management themes and objectives that will be used over the next five years to implement the new authorities under the SDWA amendments and related initiatives (including RCRA). The Strategy will serve as an "umbrella" document for the inspection, compliance, and enforcement policies and guidance packages to be developed in FY 1987 and 1988. The Strategy focuses on present State and Federal UIC compliance and enforcement programs and builds on these programs for future program needs. The Strategy does not establish specific yearly priorities for addressing violations, as yearly priority setting is better handled on an annual basis as part of the State/EPA program planning process.

The Strategy covers both State and EPA direct implementation (DI) programs. Any changes from current practices either will be implemented in FY 1988 through the annual program planning process or phased in in subsequent years. Implementation will not necessarily require States and EPA Regions to prepare a new stand alone Strategy document. Most Strategy requirements may be included as part of the annual work plan and enforcement agreement. Implementation of this Strategy will be evaluated during the FY 1988 mid-year reviews.

B. Background

EPA took a major step toward improving compliance across all its regulatory programs with the issuance of the Agencywide Compliance and Enforcement Strategy and accompanying Strategy Framework for EPA Compliance Programs in May 1984.[1] For the first time all EPA regulatory programs had to address a fixed set of criteria in developing strategies for dealing with noncompliance by the regulated communities.

The Office of Drinking Water developed its UIC Compliance Strategy for Direct Implementation Jurisdictions in February 1985. A companion UIC Compliance Strategy for Primacy Jurisdictions was drafted at the same time but never completed and issued.

Since issuance of the DI Compliance Strategy, a number of significant changes have occurred in the UIC program. First, the one year deadline has passed for rule authorized well owners to submit inventory information, complete plugging and abandonment plans, maintain financial responsibility, perform monitoring

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1. Agency Compliance and Enforcement Strategy, U.S. Environmental Protection Agency, May 1984.

and prepare and submit periodic reports. Second, Congress passed the Amendments to the Safe Drinking Water Act in June 1986 and provided EPA with considerably expanded enforcement authority, including increased civil and criminal penalties, and for the first time, the authority to issue administrative orders for compliance or penalties, or both. Third, the Office of Drinking Water has developed a definition of significant noncompliance (SNC) for the UIC program covering a broad set of violations by owners or operators of all well classes. Additionally, EPA began a UIC Enforcement Initiative in FY 1986 which resulted in the submission of ten civil litigation reports to Headquarters. All of these activities demonstrate that the UIC Compliance and Enforcement program has now moved from its initial start-up phase into full scale implementation.

C. Safe Drinking Water Act (SDWA) Requirements

The Public Health Services Act of August 14, 1912, was amended on December 16, 1974, to include the Safe Drinking Water Act (the Act), P.L. 93-523. The Act has since been amended four times, once in 1977 (P.L. 95-190), in 1979 (P.L. 96-63), in 1980 (P.L. 96-502) and finally in 1986 (P.L. 99-339). Part C of the Act, entitled "Protection of Underground Sources of Drinking Water" has as its principal purpose the prevention of underground injection which may endanger underground sources of drinking water (USDW). To accomplish this, the Administrator of EPA was required to list, within 180 days, all of the States which in his judgment needed UIC programs. He was also required under Section 1421 to propose and promulgate regulations which contain minimum requirements for effective State programs to prevent underground injection through wells that may endanger drinking water sources.

EPA promulgated these regulations under the authority of Part C of the SDWA, and where applicable to hazardous waste, under the authority of the Resource Conservation and Recovery Act (RCRA). The UIC regulations are codified in 40 CFR Parts 144 (permitting and general program requirements); 145 (requirements for State program applications); 146 (technical criteria and standards); 147 (State UIC programs); and 124 (public participation and procedural requirements). These regulations established requirements for five classes of wells: Class I, deep disposal wells for hazardous and other wastes; Class II, wells related to oil and gas production and hydrocarbon storage; Class III, wells associated with solution mining; Class VI, hazardous waste disposal wells into underground sources of drinking water (banned); and Class V, all other wells.

Following promulgation of these regulations, all States had 270 days to submit an application for primary enforcement authority (primacy) to the Administrator for approval. Section 1425 was added to the SDWA in 1980 and provided an alternative

means for States to achieve primacy for oil and gas (Class II) programs. Additionally, the 1986 Amendments to the SDWA specify that Indian Tribes may apply for primacy over wells on Indian lands. To date the Administrator has approved 33 full and 6 partial UIC State programs. EPA is directly implementing 18 full and 6 partial UIC programs in States and on most Indian lands.

The UIC Compliance Strategy mirrors the organization and thrusts in the Agency's Strategy Framework and covers the full cycle of planning, conducting, evaluating and responding to compliance problems of the national UIC program. Each section discusses the status of the existing program, present problem areas, and how we plan to improve on existing performance so that the overall goal of improved compliance may be achieved. The sections will be updated from time to time based on programatic changes. Pertinent policy and guidance documents are referenced in each section.

II. IDENTIFICATION OF THE REGULATED COMMUNITY

This section addresses two issues: A) identification of the specific classes of injection wells that are regulated under the SDWA and UIC regulations; and B) mechanisms that regulatory agencies can use in identifying the universe of injection wells and in maintaining an accurate, comprehensive inventory.

A. Well Classification

The UIC regulations define an injection well as a bored, drilled, driven or dug well where the depth is greater than the largest surface dimension and its principal function is the subsurface emplacement of fluids. The regulations categorize all injection wells into five separate classes - Classes I, II, III, IV, and V. The following tabulation presents the national federal inventory of injection wells as of January 1987 and includes only those wells with operable status, i.e., active, temporarily abandoned and wells under construction.

Class I	548	
Class II	167,806	
Class III	262	(sites)
Class IV	22	
Class V	105,403	

The quality of inventory data for Class V wells is not reliable as more wells are being identified from information developed for the Class V report to Congress.

Each well class is discussed briefly in the following subsections.

1. Class I Wells

Class I wells include industrial and municipal disposal wells, disposing of either hazardous or non-hazardous wastes, that inject below the deepest underground source of drinking water, and where the well bore is no closer than one quarter mile radius to any USDW. This classification could include a well which would otherwise be considered a Class IV well except that an aquifer exemption has been granted. Common Class I wells include: non-hazardous inorganic waste disposal, low pH waste disposal, disposal of heavy metals, and disposal of chemical manufacturing wastes.

2. Class II Wells

Produced fluid (also known as brine or salt water) disposal wells; wells which inject fluids (liquid or gaseous) to enhance the recovery of oil and gas, including dually completed wells which may also be production wells; and liquid hydrocarbon storage wells are included within the scope of the Class II category. Specifically excluded from this category are gaseous (at standard temperature and pressure) hydrocarbon storage wells, which are included within the definition of Class V wells.

3. Class III Wells

Class III wells are defined as wells which inject for the extraction of minerals including: the mining of sulfur by the Frasch process; in-situ production of uranium or other metals (including only in-situ production from ore bodies which have not been conventionally mined); and solution mining of salts or potash. Class III injections wells are commonly identified on a site basis. On site may contain hundreds of wells.

4. Class IV Wells

This category of wells are used by generators of hazardous or radioactive waste, by owners or operators of hazardous waste management facilities or by owners or operators of radioactive waste disposal sites to inject hazardous waste. In general, wells which inject hazardous fluids which cannot be classified within the scope of Class I, are considered Class IV. The criterion used to distinguish Class IV from Class I hazardous or radioactive injection wells is the location of the nearest underground source of drinking water - Class IV wells inject fluids into a formation which, within one quarter mile of the well, contains an underground source of drinking water.

Construction of any new Class IV well, and operation of Class IV wells not in operation prior to July 18, 1980, were prohibited under Federal UIC regulations Part 144 at the time that a UIC program was approved in the state. In addition, those wells which were in operation prior to July 18, 1980, were given six months after the effective date of a UIC program was approved, for injection to cease and the well to be plugged and abandoned. In essence, the only Class IV wells allowed to operate are those which are approved by EPA for use under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or under the Resource Conservation and Recovery Act (RCRA).

5. Class V Wells

Any injection well which cannot be identified as one of the above classes, is considered a Class V well. Although no regulations are in place at the time of the writing of this strategy, that prescribe specific construction, monitoring, or operating requirements for Class V wells, most states have conducted inventories and assessments within their jurisdictions. These assessments are currently being compiled into a Report to Congress to be submitted to Congress during fiscal year 1987, which will summarize State recommendations on siting, construction, and operation of Class V wells.

The number and type of Class V wells are constantly being revised due to new information. To date, eight (8) subclasses have been identified which include thirty-two (32) types of wells. The subclasses include: drainage wells, geothermal reinjection wells, domestic wastewater disposal wells, mineral and fossil fuel recovery related wells, oil field production waste disposal wells not included in Class II, industrial/commercial/utility disposal wells, recharge wells, and a miscellaneous subclass for all other wells. Attachment A lists and describes each of the types of Class V wells recognized as of September, 1986.

B. Maintaining an Injection Well Inventory

In many instances, UIC regulatory agencies, whether federal or state, have yet to obtain valid, comprehensive inventory database systems. This may be one of the most challenging problems facing many of the regulatory agencies since an accurate inventory is a necessary prerequisite to promoting compliance with program requirements. For example, in older oil and gas production regions, Regions are finding that essential well records do not exist and therefore, comprehensive inventories have not been made. Others speculate that unidentified Class I and IV Wells may exist. Obtaining Class V inventory information

is often hindered since many of the owners/operators of these type of wells are unaware that a UIC program exists. For many types of wells, it appears that the only way to obtain this information is by resource intensive field activities, which may be cost-prohibitive.

A number of mechanisms may be used to obtain and update inventory information, some of which are discussed in detail in other sections of this strategy. It should be noted that Class V inventory and assessment reports contain state specific recommendations for updating inventory systems. In general, regulatory agencies should utilize all available mechanisms, including, but not limited to:

- Educating the regulated community through outreach activities to encourage voluntary compliance;
- Contacting private, Federal, State, County/Parish, and local governmental bodies who may have knowledge or control over certain classes of injection wells, such as: petroleum information service organizations, state mine & geological survey agencies, state health departments; county sanitation agencies; water well drillers; heating & plumbing companies; city building permit departments; university research centers; target industry groups; manufacturer's associations; municipal agencies (water, wastewater, streets); and
- Discovery of unidentified injection activities through inspection activities and citizen complaints (although this may happen, it is not something that can be a "planned" activity).

III. PROMOTING VOLUNTARY COMPLIANCE

A. Goals and Objectives

One goal of this strategy is to promote a high level of voluntary compliance by the community subject to the UIC regulations. To achieve a high rate of voluntary compliance, EPA must ensure the public and the regulated community remain informed of all current and future requirements of the UIC program. EPA must also maintain a visible enforcement presence through field inspections and selective use of judicial and administrative enforcement action.

To ensure that all interested parties in both the regulated community and the general public are fully informed about the UIC program each Region and State should have a proactive outreach program. The outreach program supplements the public participation regulations which encourage public involvement in the planning

and operation of UIC programs.[2] Outreach should be coordinated between States and Regions to the extent practical to maximize the effectiveness of all outreach efforts. The outreach program is intended to meet two objectives:

- Inform the regulated community in order to promote voluntary compliance; and
- Involve the public in the compliance and enforcement process.

To achieve these objectives specific information about the UIC program must be communicated to the target audience. For the UIC program there are six principal audiences:

- The regulated community including owners and operators of Class I, II, III, IV and V wells;
- Professional organizations and associations which represent the regulated community;
- Public interest groups and environmental organizations;
- Labor, especially the workforce at commerical disposal operations;
- Well drillers, service companies and consultants; and
- The general public.

B. Priority Audience -- The Regulated Community

Resources should be focused primarily on informing the regulated community of the requirements, especially any new or changing requirements. In addition, new well owners/operators may require specific education and outreach. To reach the other audiences, the primacy agent should consider speaking at meetings, participating in work shops, etc., relying on the media and may encourage the audiences to use some of their own resources to distribute the necessary information.

To achieve the goal of voluntary compliance the industry must know what the requirements are and understand the objectives of the regulations. The information that needs to be conveyed to the regulated community includes:

- Objectives and requirements of the UIC Program regulations;
- What constitutes a violation;

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2. See GWPG #8 Interim Guidance for Acceptable State UIC Program Work Element for Public Participataion and Information.

- The consequences of violation (enforcement authorities penalties, etc.); and
- Opportunities for input and participation.

The target group within the regulated community is the owners/operators of Class II wells. Class I and III well owners/operators appear to be generally well informed of the regulations, while Class II operators and owners are much more likely to be unaware of upcoming deadlines, changes in requirements etc. Within the priority group of Class II wells, the greatest outreach efforts are usually required for small, economically marginal well owners/operators. These operators generally require more rigorous outreach and possibly technical assistance to ensure that they understand the requirements.

While these are the general expectations for outreach needs, each Region and State should make an effort to evaluate which groups require additional assistance and/or information in order to comply and then to design outreach activities to provide the needed information.

C. Other Audiences

Public interest/environmental organizations are expected to maintain a high degree of interest in UIC activities, especially concerning the disposal of hazardous wastes. They can be of assistance in promoting voluntary compliance by reporting apparent violations and by supporting needed legislative and regulatory changes.

Local police forces, firemen, county, and municipal workers can provide valuable information regarding the regulated community if they are aware of who is regulated and what constitues a violation and why.

Finally, the general public will have the least direct contact with the UIC regulations and the least amount of technical expertise to review information. The outreach objective for this audience is to provide an understanding of the UIC program and its goals, and inform the public of the methods of participation available to them. Public participation can be expected in spotting illegal disposal practices. Additionally, the general public needs to be made aware that disposal of wastes through properly constructed wells is often a viable and environmentally acceptable waste disposal practice whereas improper disposal may adversely impact underground sources of drinking water.

D. Regulatory Deadlines and New Requirements

It is especially important to notify operators of important regulatory deadlines and new requirements as they are promulgated or changes to the existing regulations are made. The notifications should explain the new or changed regulations as well as inform the operators of their existence. Examples of requirements which will require outreach include:

1. Casing and Cementing Requirements §144.22(b) and §144.28(e)

Three years after the effective date of the UIC program, casing and cementing requirements become applicable to Class II enhanced recovery and hydrocarbon storage wells authorized by rule. In addition to notifying operators of the due date, the implementing agency should distribute guidelines on how to comply with the requirements. The guidelines should include, as specifically as possible, the required casing and cementing parameters (quantities and locations of cement, etc.) as well as the acceptable remedial methods to bring the wells into compliance.

2. Permit Applications §144.31(c)(1)

Operators of rule authorized wells, except Class V and Class II enhanced recovery and hydrocarbon storage wells, must submit permit applications for those wells no later than 4 years after the effective date of the UIC program or the rule authorization expires. It should be stressed that the wells may not be operated after the due date if the permit applications are not submitted.

3. Mechanical Integrity Demonstrations §144.28(g)(2)(iv)

Operators of Class II enhanced recovery and hydrocarbon storage wells must demonstrate the mechanical integrity of those wells at least once during the first 5 years of the UIC program. As the 5 year deadline approaches, operators which have not demonstrated the mechanical integrity of those wells should be notified of the requirement. The implementing agency may also consider asking these operators for compliance schedules to ensure the demonstrations are made by the deadline.

4. Rule Authorization Expires §144.21(a)(3)

Rule authorization for Class I, II, and III wells, except hydrocarbon storage and enhanced recovery wells, expires 5 years after the effective date of the UIC program unless a complete permit application is pending. Those operators who have submitted incomplete permit applications should be notified of the deficiencies of the application(s) far enough in advance of the due date to

allow the operator to submit the additional information by the due date. (Rule authorization will have already expired for those wells for which an application has not been submitted by 4 years after the effective date.)

E. Existing Requirements

Certain ongoing requirements are frequently violated by many operators. In many cases, these violations do not directly endanger the environment; however, failure to provide certain information or perform certain duties seriously undermines the regulatory agency's ability to protect USDWs. Outreach efforts to inform operators of their obligations is a tool that is often effective and less resource intensive than taking enforcement actions to bring operators into compliance. If compliance can not be achieved voluntarily the regulatory agency must be prepared to take selective enforcement action. Some examples of these violations are:

- Failure to notify of transfer of ownership;
- Failure to notify prior to plugging and abandonment;
- Failure to submit plugging and abandonment reports;
- Failure to notify prior to conducting mechanical integrity tests;
- Failure to submit routine monitoring reports; and
- Failure to notify before or after workover.

F. Outreach Techniques

Suggested methods of conveying program information to the target audience are discussed in this section. The particular methods chosen should be analyzed and the outreach programs adjusted to focus efforts on the methods which prove to be most effective in reaching specific audiences and promoting compliance. Some of the techniques available include:

1. Direct Mail Notification to Owners/Operators. Direct certified mail notifications can be sent to the owners and operators of injection wells informing them of the regulation requirements and their due dates. The purpose of the mass mailings is to work with the operators in order to obtain the information or compliance required by the regulations, and to document in enforcement files that several attempts were made to do so.

2. Personal Contact with Operators/Owners - Through meetings, telephone calls or letters requesting additional information, substantial public outreach can be accomplished.

3. Inspections/field visits - The field inspectors, whether EPA, State or contractors, provide a continual and effective avenue

for information transfer to the regulated community and the general public via site inspections.

4. Workshops - Workshops help establish a good rapport between the regulators and the regulated community. Some examples of workshops which the implementing agency may consider are:

   * How to fill out a permit application;
   * How to comply with casing and cementing requirements; and
   * How to comply with financial responsibility requirements.

   Workshops on the UIC program in general may also be conducted for the general public. These workshops could explain how the public can get involved in the program through commenting on permits and bringing violations to the implementing agency's attention.

5. Local Media/Press Releases - Press releases concerning enforcement actions can be very effective in making owners/operators aware of the consequences of noncompliance. In addition, where possible, articles printed in the local newspapers and stories on local television and radio can inform the general public of the goals of the program, the regulatory actions being taken to protect public health and the environment, and the need for public participation.

6. Brochures - Brochures can be developed which explain the UIC program in simple terms for the general public. These brochures can be distributed by the implementing agency in response to requests or to environmental organizations who can then distribute the brochures to their membership.

7. UIC Hotline - Implementing agencies may wish to consider a telephone "hotline" service which would could quickly answer both basic questions on the program and could provide some technical support to operators. The service could provide help in interpreting the requirements and assistance on technical questions.

8. National Media Campaign - News items important on a larger scale will be made available to the national media. The information presented here will also serve mainly to inform the general public and public interest/environmental groups. Notices in trade press and in law/policy journals can also be employed to reach segments of the regulated community.

9. EPA Presentations at Conferences and Meetings - EPA will seek out and respond to requests from national trade and industry organizations and public interest/environmental groups by giving UIC presentations to the extent resources permit at conferences and meetings.

IV. COMPLIANCE MONITORING

A. Goals and Objectives

Compliance monitoring encompasses a broad range of activities conducted at the State, Regional and facility level to verify compliance by owners and operators with applicable regulatory requirements. The goal of a compliance monitoring program is to identify all instances of noncompliance and effectively and efficiently provide this information to persons responsible for taking appropriate action.

B. Compliance Monitoring Activities

For the UIC program compliance activities can be divided into four separate categories: (1) file review for Class II rule authorized wells; (2) permit reviews for Class I, II and III wells; (3) monitoring and operating report reviews; and (4) inspections. Though each of these activities is described separately in this section, they are complimentary, as the information from each activity forms part of the owner and/or operators overall compliance status.

1. File Review

The primacy agent is required to conduct a comprehensive file review[3] at least once every five years for all rule authorized Class II wells to assure compliance with regulatory requirements. Class II wells authorized by rule are expected to meet the same requirements as wells authorized by permit with the major exception being the area of review requirement. To conserve resources, the file review could be scheduled to coincide with mechanical integrity testing which is also required at least once every five years for Class II wells or at the time of inspection.

For those States that have completed their first five years of UIC implementation and are entering the second five-year cycle, there exist two alternatives to assure continued compliance by rule-authorized Class II wells:

(a) conduct file reviews on each well every five years to determine that nothing in the file, workover reports, operational history, and related records indicate an endangerment to USDWs; or

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3. Guidance for conducting a proper file review can be found in: Memorandum from Victor Kimm on FY 1985 SPMS Commitments, August 23, 1984.

(b) submit to EPA documentation that the State has in place and utilizes statutory authority, regulations, forms, processes, and personnel to:

(i) review and approve all workovers to assure that the well continues to meet the nonendangerment requirement;

(ii) review and approve all changes in the character of the injection fluid, flow, pressure, scope and type of project, ownership and evaluate overall compliance history; and

(iii) review, approve/disapprove, or require modifications to the construction and operation of all new injection wells completed above, below or in the same pool and production wells completed in pools below the injection formation, or require changes in the operation of other wells in or around the injection well to assure that USDWs will not be endangered by that injection well.

2. Permit Review

The duration of a Federal permit for Class II and Class III wells is for up to the lifetime of the well. Some States issued permits for Class II and III wells for a 5 year period. The Federal regulations state that the Regional Administrator or State Director shall review each issued permit at least once every five years to determine whether it should be modified, revoked and reissued,or terminated (40 CFR 144.36). Such permit reviews should be conducted following procedures outlined in Agency guidance #26.[4]

The Regions and Primacy States shall develop a five-year strategy for permit reviews and shall schedule these five-year reviews so as to allow adequate time for each Class II or III well permit review. Detailed schedules are to be submitted with the annual DI and State program plans.

3. Review of Monitoring and Operating Reports

Each owner/operator must submit monitoring and operating reports for his well to remain in compliance. The specific reporting requirements vary with well class and can be determined by consulting the appropriate Federal and State regulations. For permitted wells, the reporting

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4. Procedures for five-year review of Class II and III permits are contained in Ground-Water Program Guidance No. 26, ODW, UIC Branch, July, 27, 1981.

requirements often are incorporated into the permit itself. Failure to submit any required report in a timely manner is a violation and may subject the owner/operator to enforcement action.

Careful review of the owner/operator reports can lead to the identification of potential noncompliance, e.g., an owner/operator injecting at pressures exceeding the authorized injection pressure. Reports should be reviewed individually and then compared to previous reports to reveal possible or actual noncompliance, e.g., detection of possible leaks in a well deduced from pressure fluctuations in a series of monitoring reports. Each Region and State should have written procedures on how monitoring reports will be reviewed and what actions will be taken to resolve any noted noncompliance.

4. Inspections

(a) Goals and Objectives

The fundamental goal of all inspections is to make a determination of compliance at a particular well or facility. All inspections are to be conducted so that any information discovered may be used to support judicial or administrative enforcement actions. Implementation of an effective inspection program should lead to the discovery of violations existing in the universe of injection wells. Inspections also lead to the establishment of Agency field presence and can be used for technical assistance or outreach.

(b) Field Presence

Establishment of effective field presence is important to deter noncompliance and to improve communication between the regulatory agencies and the regulated community. All inspections should be conducted in a professional manner. Each approved State and DI program should have written procedures for obtaining legal entry to a facility, conducting an inspection, collecting and transporting samples, and for properly documenting the inspection results.[5]

Joint inspections with Regional and Headquarters personnel may be scheduled periodically especially when enforcement is an issue. Certain circumstances may require the joint presence of EPA and State personnel at

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5. Federal procedures are outlined in the UIC Inspection Manual (forthcoming).

an inspection. Inspectors from other programs should be notified and may be asked to participate when the facility in question falls under more than one jurisdiction, e.g., RCRA personnel may want to participate in the inspection of a Class I hazardous waste injection well. All joint inspections should be carefully coordinated so that the objectives of each of the participating parties can be met satisfactorily.

(c) Inspection Strategy Development

In order to provide adequate coverage of the regulated community (field presence) and be responsive to emergency situations and enforcement needs, each State and Region should develop an inspection strategy. The inspection strategy should include an inspection plan that covers a five-year time span for all classes of wells in the State. The number of wells to be inspected during the five year period will be determined according to Agency and State priorities. This document contains the minimum UIC inspection goals that each State and Region will be required to meet. Additional Federal inspection requirements (if any) will be set forth in the Agency's Annual Operating Guidance and incorporated in the State's annual work plan.

Individual State inspection plans must incorporate all applicable Agency criteria (as established in this Strategy) and may also take into consideration additional State-specific priorities such as presence or absence of certain types of wells, environmental risk, population risk and unique well construction types. Where primacy State regulations are more stringent than Federal regulations, the State inspection plan should reflect all pertinent State regulations.

(d) Annual Inspection Priorities and Goals

Each well class is subject to numerous types of inspections. These inspection types have been ranked by priority according to applicable regulatory requirements and the necessity of a particular inspection for safe well operation. Table IV-1 summarizes the inspection types, describes the rationale for the inspections, and delineates their relative priorities. The column on the far right indicates the annual minimum inspection goal for each inspection type and well class. Descriptions of each priority level and implementation strategies are discussed below.

(i) Priority 1 - Emergency Inspections, Class IV Closure Verification, and Citizen Complaint Investigation

All emergency inspections, and Class IV closure verifications demand an immediate response. Citizen complaint investigations warrent prompt attention but should be evaluated (a phone call may be sufficient) to determine their verasity before assigning them top priority. Inspections should be conducted as soon as possible upon notification of the situation. These types of inspections cannot be predicted in advance, therefore adequate resources should be allocated in anticipation of their occurrence.

(ii) Priority 2 - Mechanical Integrity Test Witnessing and Enforcement Inspections

Mechanical integrity testing, file reviews and permit reviews are to be conducted at least once every five years according to current regulations. All scheduled Class I MITs and at least 25 percent of Class II and III MITs are to be witnessed by an inspector. Enforcement related inspections are to be conducted at all facilities to support planned and on-going enforcement activities, including follow-up to initiated actions.

(iii) Priority 3 - Preoperational, Plugging and Abandonment Verification and Record Inspections

Preoperational inspections are necessary to assure compliance of a new or reconditioned well with permit conditions. States and Regions are expected to conduct at least one preoperational inspection for each new and reconditioned Class I well. All other wells will be inspected according to resource availability. States can examine the trends in the number of new wells being permitted annually and the number of wells being reworked to obtain a reasonable estimate of the number of annual preoperational inspections to be conducted.

Plugging and abandonment of one hundred percent of Class I wells and 25% of Class II and III wells are to be witnessed annually. The number of P&A inspections required over any time period can be estimated from historic trends within the State.

(iv) Priority 4 - Compliance Verification

Compliance verification by an inspector should occur at least annually at all Class I wells and once during the five year review period at all other facilities. A compliance verification inspection can be incorporated into any higher priority inspection and fulfill this goal.

(e) Neutral Inspection Scheme

For all UIC Inspections where there does not exist some "probable cause" for the Region or State to believe that a violation of the SDWA, Federal or State regulations has or is occurring, the regulatory agency needs to be able to establish that the facility was selected for inspection on the basis of an unbiased, prioritized and consistently followed scheme in order to obtain a warrent to enter and inspect the facility if consent is withheld. Such a "neutral" inspection scheme may be based on one or a combination of the following factors:

- Construction and/or age of wells;
- Geographic location;
- Hydrologic setting;
- Program priorities; and/or
- Compliance history.

Regions and States are to include the rationale for their neutral inspection scheme as part of their annual inspection plan submittal. What makes sense for one State or Region may not be applicable in another location. No one neutral scheme will be right for all situations. The important criterion is that the inspection target may not be singled out from the group for regulatory scrutiny without a rational basis for the selection.

Table IV-1

TYPES OF INSPECTIONS

TYPE	DESCRIPTION	WELL CLASS	ANNUAL INSPECTION GOALS
Priority 1			
Emergency Inspection	Response to an emergency situation, one that constitutes imminent hazard	All	100%
Class IV Closure Verification	Assurance of proper closure of Class IV wells (those that dispose of hazardous waste into or above an USDW)	IV	100%
Citizen Complaint Investigation	Response to complaints registered by citizen or citizen's group where the regulatory agency has reason to believe that the potential for endangerment exist	All	100%
Priority 2			
Mechanical Integrity Test Witnessing	Assurance that there are no significant leaks in casing, tubing or packer(s) and no significant fluid movement into USDWs through vertical channels adjacent to the well bore	I II III V	100% 25% 25% As resources allow
Enforcement Inspection	Enforcement investigation to document violations (including follow-up visits)	All	100%
Priority 3			
Preoperational Inspection	Verification of adequate construction and engineering prior to start-up, may include the following: open and cased hole logging drilling and well construction primary cementing formation pressure testing injectivity testing mechanical integrity testing	I II, III, & V	100% As resources allow

TYPES OF INSPECTIONS (cont.)

TYPE	DESCRIPTION	WELL CLASS	ANNUAL INSPECTION GOALS
Priority 3 (cont)			
Plugging and Abandonment Verification	Verification that the owner/operator has complied with all regulatory requirements associated with plugging and abandoning a well	I II III V	100% 25% 25% As resources allow
Priority 4			
Compliance Verification	Assurance that owner/operator is in full compliance with permit conditions or regulations	I	Annually
		II & III	As time and resources allow, but at least once during the 5 year review cycle
	Verification or witnessing of facility operations, performed either routinely or in response to a complaint. May involve any of the following: check for signs of wear check instruments and gauges verify number and identity of wells review facility records review monitoring system evaluate operation and maintenance	V	As resources allow

V. VIOLATIONS AND APPROPRIATE ENFORCEMENT RESPONSES

Appropriate responses to violations will be determined according to the severity of the violation. All violations will be recorded and will receive a response; all violations will also be considered for possible formal enforcement action if less formal methods do not result in compliance. Regardless of the response chosen, the States and Regions should continue to monitor the violation and should escalate the enforcement response if compliance is not achieved in a timely manner. Monitoring and escalation should continue until the violator is returned to compliance, and further monitoring may be necessary to ensure continuous compliance in some cases.

In general, a strong enforcement presence should be created in each segment of the regulated community by taking sufficient numbers of enforcement actions for different types of violations. Because different types of responses require varying amounts of resources, the Regions and States may want to respond to a mix of types of violations, with various types of responses.

The program's first priorities are situations which endanger or may endanger a USDW, and Significant Noncompliance (SNC) (this category will include most if not all endangerment situations). Both States and Regions are expected to take timely and appropriate enforcement actions for all SNCs. In cases where a State cannot or will not take action, the EPA Region may notify the State that an appropriate action was not taken. In this case, after 30 days, the Region must issue an Administrative Order or commence a civil action if the State has still not taken an appropriate action. While this mandatory enforcement provision of the SDWA Amendments ensures that appropriate actions will be taken, it is expected that the Regions and States will jointly discuss and track progress with SNCs and work together to ensure that appropriate actions are taken in a timely manner. Finally, other violations should be prioritized according to the guidelines below.

Citizen complaints will be investigated by Regions and States and written responses to the complaining party will be provided. However, repeated complaints of a substantially similar nature from the same party or parties need not receive individual responses.

A. Timely and Appropriate Enforcement Expectations

Timely and appropriate enforcement expectations were established in the (FY 1987) Agency Operation Guidance and

Reporting Guidance for UIC (GWPG #53).[6] The definition of Significant Noncompliance is presented in Attachment B.

In addition to SNCs, certain other violations will also fall under the timely and appropriate system. These are defined in the December 4, 1986 memorandum, UIC Program Definition of SNC.[7] The additions, termed "Nonsignificant Noncompliance" include wells that fail mechanical integrity or are found injecting at excessive pressure, but are not considered to be SNC according to the definition. For these wells, the Director will negotiate an agreement with the State/Region on taking appropriate action against the owner/operator. The agreement will state that a specific percent of wells in each State failing MI or found over pressure will have to come into compliance within 90 days of discovery of the failure. The exact number should be negotiated between the State and Region. The agreement should also establish the variety of actions which the State will take to bring the remaining wells into compliance within a set period.

States and Regions are expected to address all instances of SNC according to the milestones and definitions of timely and appropriate enforcement response below. (The timely and appropriate system is illustrated in Figure V-1.) The State or Region should take one of the following actions within 90 days after the SNC is identified:

1. Verify that the owner/operator has returned to compliance;
2. Place the owner/operator on an enforceable compliance schedule and track to ensure future compliance; or
3. Initiate a formal enforcement action against the owner/operator.

A formal enforcement action as defined in the Policy Framework[8] at a minimum:

- "explicitly requires recipient to take some corrective/remedial action, or refrain from certain behavior, to achieve or maintain compliance;

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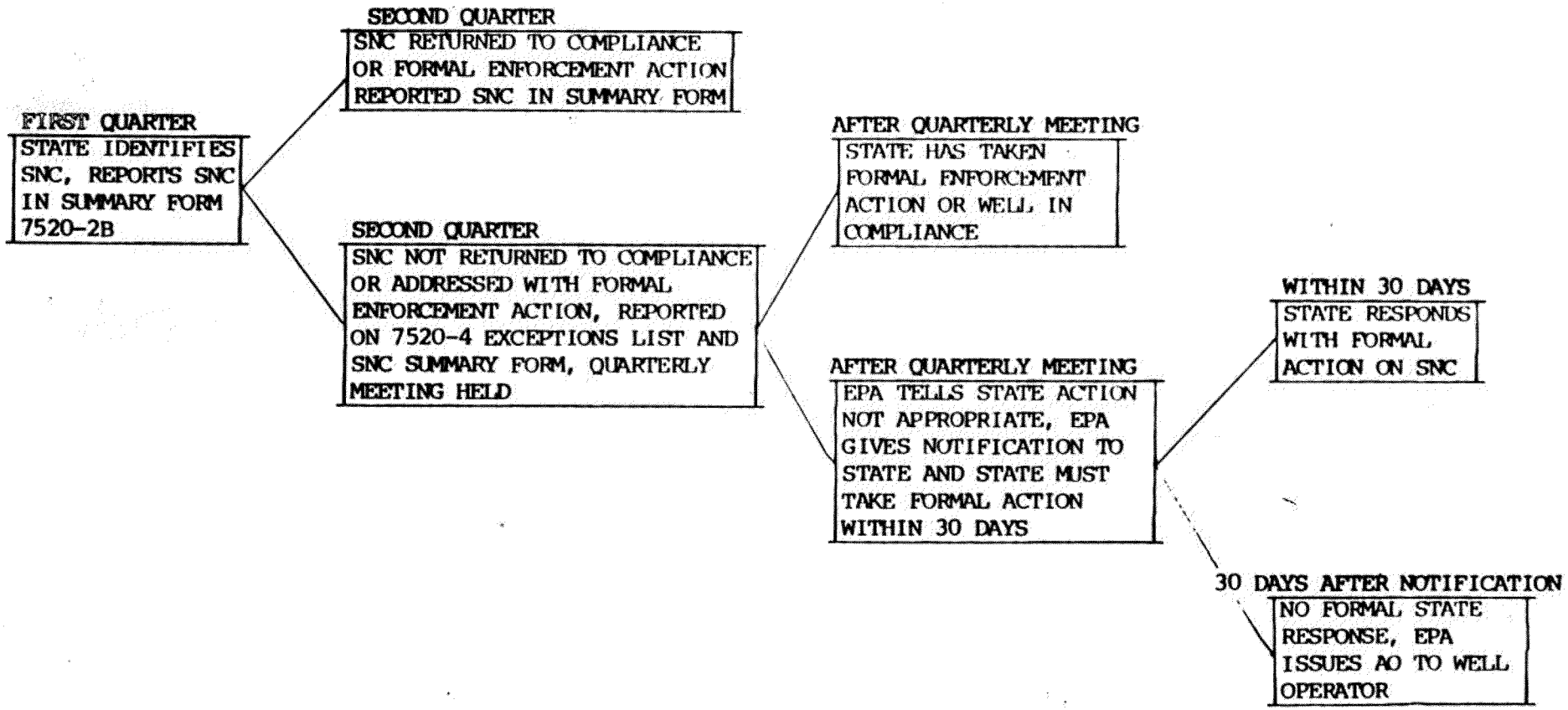
6. FY 1987 Reporting Requirements - Underground Injection Control Program Guidance #53, Office of Drinking Water, UIC Branch, December 22, 1986.

7. UIC Program Definition of Significant Noncompliance (SNC), Memorandum from Michael B. Cook to Water Management Division Directors, Water Supply Branch Chiefs and State Directors, December 4, 1986.

8. Policy Framework for Implementing the State/EPA Enforcement Agreements, August 26, 1986.

FIGURE V-1



- explicitly is based on the issuing Agency's determination that a violation has occurred;

- requires specific corrective action, or specifies a desired result that may be accomplished however the recipient chooses, and specifices a timetable for completion;

- may impose requirements in addition to ones relating directly to correction (e.g., specific monitoring, planning or reporting requirements);

- contains requirements that are independently enforceable without having to prove the original violation and subjects the person to adverse legal consequences for noncompliance."

Specific State actions that meet this definition should be specified in the State/EPA Enforcement Agreements.

B. Appropriate Use of Penalties

States and Regions will pursue a penalty, or sanctions negotiated in the State/EPA Enforcement Agreement in all judicial actions, and for all cases which involve one or more of the following conditions:

- Unauthorized injection;
- Violation of an administrative order or judicial decree;
- The owner/operator has shown recalcitrance; and
- The owner/operator falsified information.

In addition, penalties should be used in State and Regional programs to create general deterrence in the regulated community and to prevent repeat violations. Civil penalties and other sanctions play an important role in an effective enforcement program and State and Regional programs should have a clear plan for how they will use their penalty and other sanction authorities.

EPA Regions must follow the Agency's Uniform Penalty Policy[9] in calculating appropriate penalties. ODW plans to develop a specific UIC Penalty Policy for Regional penalties after more experience has been gained with the SDWA amendments and new AO authorities. Until the issuance of the UIC Penalty Policy, Regions should continue to use the Agency Uniform Penalty Policy which requires as a minimum, the recovery of any economic benefit that accrued from noncompliance.

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9. Policy on Civil Penalties, EPA General Enforcement Policy #GM-21, U.S. EPA, February 16, 1984.

Unlike the Regions which must follow the Agency penalty policies, the States are encouraged to develop and use a penalty policy, but are not required to use the EPA policy. However, States are generally encouraged to calculate and attempt to recoup the economic benefit of noncompliance, and EPA's computer model for calculating economic benefit is now available to States. In addition, the States should discuss with the Region how the State generally plans to use its penalty and sanction authorities and how it plans to calculate penalties. See also the discussion of penalties in Section VI, "State/Federal Enforcement Relationship."

C. Endangerment

In addition to the other administrative order authorities, the 1986 amendments to the Safe Drinking Water Act expanded EPA's authority to issue administrative orders (under §1431(a)) in situations where there may be an imminent and substantial endangerment to a USDW (this authority was formerly limited to endangered public water supplies). EPA should coordinate with States which lack this authority and consider an arrangement to take action in primacy States as requested.

D. General Enforcement Expectations

In addition to SNC, twenty-four separate types of violations have been identified. (Citations from the Federal Register are included for reference; States will have their own regulations governing these violations.) These are divided in Table V-4 into three categories which reflect a descending level of priority. While all SNCs must receive appropriate action, violations found in Category I should generally receive attention before those found in Categories II or III.

Table V-1 identifies thirteen factors which may influence the selection of an appropriate response to a particular violation listed in Table V-3. In selecting the appropriate response to the perceived violation, the authorized agency should consider these factors. The first factor in the list is "Nature of the injected fluid." Obviously, a violation involving the injection of a hazardous waste would indicate a stronger response than one involving the injection of fresh water in a waterflood operation.

Table V-2 lists several potential responses by EPA or a State to a perceived violation. This list includes many of the most common types of responses and EPA's enforcement authorities; is does not include all the possible State responses as these vary among States.

The minimum response to a violation is the first response "exed" after that particular violation in Table V-3. For instance,

the minimum response to any violation in Category I is "C", a warning letter. In the case of a financial responsibility violation in Category II the minimum response is "A", a telephone call.

Of course, these "exed" responses are the minimum responses to a violation; a more severe response may always be taken and in some cases will probably need to be taken at the discretion of the Regions and States.

Any one of the listed responses (A through L) in Table V-2 may be appropriate as a final response to a specific violation, if that response is designated as appropriate in Table V-3 and if the response results in timely and effective compliance. However, a field inspection (D.) may not be the sole final response to a confirmed violation; some other designated follow-up response (A through C, or E through L) must also be performed. While a designated response in Table V-3 may be sufficient, the absence of an "X" under a given response in Table V-3 does not preclude use of that response, it simply means that that response is not by itself sufficient. (The Regions should also refer to the guidance (to be issued) on choosing appropriate enforcement authorities.)

E. Use of Enforcement Authorities at Class I Facilities

Any violations found at a Class I facility is listed as a SNC and State and Regional actions must meet the timely and appropriate enforcement criteria. In the case of UIC violations at Class I hazardous facilities, coordination is necessary with the authorized state or federal hazardous waste program (see Section VIII, "Coordination with other Programs and Agencies".) In general, in the case of UIC violations at RCRA/UIC facilities, UIC inspectors and staff developing enforcement cases should work closely with RCRA staff to ensure that joint enforcement cases are taken when appropriate and that the entire facility is considered in determining the need for corrective action, closure etc., in accordance with applicable policy.

If violations of the federal RCRA or state hazardous waste regulations are found, the following federal actions (or equivalent state actions where applicable) may be taken.

Under RCRA §7003, EPA may issue administrative orders necessary to protect public health and the environment from imminent and substantial endangerment due to solid or hazardous waste disposal. Well owner/operators also may be issued RCRA §3008 orders for violating RCRA provisions.

Finally, CERCLA §106 orders may be issued if a well is responsible for an actual or threatened release of any hazardous substance creating an imminent and substantial endangerment to health, welfare or the environment.

TABLE V-1

FACTORS TO BE CONSIDERED IN DETERMINING APPROPRIATE RESPONSE

- Nature of the injected fluid.
- Depth of USDW.
- Past record of compliance by operator with UIC rules and other environmental or appropriate statutes.
- Nature of geological formation.
- Adequacy of response by other agencies (local, State, Federal).
- Likelihood of new contamination of USDW.
- Quality of USDW.
- Cooperation of owner or operator with EPA.
- Degree of noncompliance.
- Willfulness of violations.
- Deterrent and precedential value of action.
- Well construction features.
- Strength of case.

TABLE V-2

POSSIBLE APPROPRIATE RESPONSES TO VIOLATIONS

A. Telephone call (must have appropriate documentation).

B. Warning letter tailored to individual operator notifying him/her of the nature of the violation and required responses (must include possible criminal/civil liabilities).

C. Field inspection (generally not appropriate as a final response to a violation).

D. Opportunity for consultation ("show cause" meeting) which provides the violator a chance to ask questions of the agency and get information.

E. Formal request for information (may include new information, mechanical integrity test, monitoring, etc. - see §144.27). Note: Owner/operator's failure to respond to this request results in automatic termination of authorization by rule, (§144.27(c)).

F. Request for permit application (§144.27; 144.12(c) or (d)). Note: When §144.27 information request authority is not appropriate, the §144.25 authority can be used to terminate authorization by rule if the permit application is not submitted in a timely fashion, or if the permit is denied.

G. Initiate permit modification, alteration or termination or impose or modify a compliance schedule.

H. Issue Administrative Order to owner or operator of a Class V well requiring such actions as may be necessary to prevent primary drinking water standard violations or to prevent contamination which may otherwise adversely affect the health of persons. (§144.12(c)(2)).

I. Commence bond forfeiture or utilize other financial mechanisms to plug the well.

J. §1431 SDWA Administrative Order or, where well is injecting solid or hazardous waste, RCRA, §3008 or §7003 Administrative Order (or where appropriate, a CERCLA §106 Administrative Order).

K. Issue Administrative Order.

L. Referral to State AG/Department of Justice (DOJ) (Civil or Criminal).

TABLE V-3

CATEGORY I	APPROPRIATE RESPONSE (SEE TABLE V-2) A	B	C	D	E	F	G	H	I	J	K	L
24 hour Reporting and/or Written Follow-up §144.28(b), 144.51(1)(6)	X	X	X	X	X	X	X			X	X	
Well Construction, 1/Part 146, §144.28(e) casing and cementing	X	X	X	X	X	X	X			X	X	X
Operating requirements §144.28(f), (2)	X	X	X	X	X	X	X			X	X	X
Failure to Plug and Abandon properly if nonendangering	X	X	X	X	X	X	X	X		X	X	X
Contamination of USDW, §144.12, 1431, SDWA	X	4/	4/		X					X	X	X
Compliance Schedule 1/, §144.39(a)(4), 144.57(1)(5), 144.53	X	X	X		X					X	X	X
Record Retention, §144.28(i), 144.51(j)(2)	X	X	X	X		X	X				X	X

1/Suspected/known endangerment; willful violations

2/Strongly recommended in conjunction with referral, as applicable

3/Suspected/known endangerment

4/Where an aquifer exemption is pending, these responses may, in some cases, be appropriate while the exemption is being processed.

APPROPRIATE RESPONSE
(See Table V-2)

CATEGORY II	A	B	C	D	E	F	G	H	I	J	K	L
Financial Responsibility (inadequate and/or failure to submit) §144.28(d), 144.60-70, 144.52(a)(7)	X	X		X	X	X	X				5, X	
Failure to Make Required Notification (P&A, MIT, transfer of ownership, etc.) §144.28(g), (j) (1) 144.23(b)(3), §144.51(l)(n), 144.13		X	X	X	X	X	X				X	X
Failure to Monitor, §144.28(g), Part 146		X	X	X	X	X	X				X	X
Well Construction (below ground construction, no suspected endangerment) §144.28(e)		X	X	X	X	X	X				X	X
Operating requirements (no suspected endangerment but violation substantial), §144.28(f), Part 146, §144.51(a), (e)		X	X	X	X	X	X				X	X
Failure to P&A properly (no suspected endangerment), §144.52(a)(6), 144.28(c) 146.10, 144.51(o), 144.23b		X	X	X	X	X	X		X		X	X
Failure to run M.I.T., §144.28(g), 144.51(p)		X	X	X	X	X	X		X		X	X
Compliance Schedule (non-endangering) §144.25 (Results in unauthorized Injection)	X	X	X	X			X				X	X
Failure to comply with permit condition, §144.51(a) (not included elsewhere)	X	X	X	X			X		X	X	X	X
Failure to apply for a permit, §144.25 (Results in unauthorized) Injection)	X	X	X	X	X	X				X	X	X
Mechanical Integrity Failure which is not endangering and is not included under SNC milestones		X	X	X	X	X				X	X	X

APPROPRIATE RESPONSES
(See Table V-2)

CATEGORY III	A	B	C	D	E	F	G	H	I	J	K	L
Report - Incomplete - No Report - Late - Incorrect §144.28(h), (k), 144.51(o), Part 146,	X	X	X	X	X		X				6/ X	
Well Construction (above ground, nonsubstantial), §144.28(e) 1/	X	X	X	X	X	X	X				6/ X	
Operating requirements (not endangering, repetitive or substantial), §144.52(a), Part 146	X	X	X	6/	X	6/	X				6/ X	
No P&A Plan 8/, §144.23(b)(2), 148.28(c)	X	X		X	X							
Unauthorized P&A (nonendangering) §144.23, 144.28(c)		X	6/	X	X	6/	7/		X		6/ X	
Inventory Requirements 7/ (1 year inventory requirements) §144.26	X	X	X	X	X	X						

6/ Area Permits Only

7/ Failure to submit inventory results in automatic termination of authorization by rule- see unauthorized injection in Categories I and II.

8/ Request operator to submit P&A plan under §144.27. Failure to submit plan after request results in termination of authorization by rule - see unauthorized injection in Catgories I and II.

VI STATE/FEDERAL ENFORCEMENT RELATIONSHIP

Many States have received approval either under §1425 or §1422, to implement the UIC program. However, EPA retains overall responsibility for national management of the program. To enable EPA to properly oversee and ensure consistent, and effective State and Regional programs, basic reporting requirements and minimum performance expectations have been established. EPA also has continuing responsibilities for effective grants management, technical assistance, and enforcement when States do not take action to ensure protection of public health, and the environment.

A. Enforcement Relationship

The State/Federal enforcement relationship should be a partnership with clear, mutual expectations established each year as needed, through the State/EPA Enforcement Agreements process. These agreements should be negotiated according to UIC Agreements guidance, the Agency-wide Policy Framework for Implementation of the State/EPA Enforcement Agreements, and other general and program specific guidances.[10] The Agreements should establish:

- Clear oversight criteria and measures;
- Protocols and procedures for oversight, including criteria for oversight of civil penalty assessments;
- Criteria for direct federal enforcement;
- Advance notification and consultation; and
- Reporting requirements.

The Agreements should establish regular, efficient procedures for communication, and mutual performance evaluation and feedback. These established lines of communication -- monthly phone calls, quarterly meetings etc. -- should be used to discuss and coordinate enforcement cases, particularly the status of SNCs. In discussions between Regions and States that have primary enforcement responsibility, the State and Region should agree upon who will take action and a timeframe in which the action will be taken. It may be desirable to discuss both the State's and Region's entire case loads to divide responsibilities and to provide all the assistance needed to quickly handle the cases. These commitments should be reviewed in each discussion and adjustments made accordingly. If, for example, a State finds it cannot provide support for a Regional lead case, which it had committed to performing, this should be discussed and the work redistributed.

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10. Guidance for the FY 1987 State/EPA Enforcement Agreement Process, Memorandum from A. James Barnes, April 15, 1986.

The revisions made to the Policy Framework in 1986 added two new areas which should be discussed in the Agreements; (1) strengthening the relationship with State Attorneys General; and (2) improving use of penalty authorities.

1. Involvement of State Attorney General

The designated Agency is responsible for ensuring that the State AG or appropriate level staff is properly notified and consulted about planned enforcement actions to meet Federal commitments. Procedures and protocols for notification and consultation between the designated agency and the State AG should be defined.

2. Improving use of Penalty Authorities

In the area of penalties, unlike other performance criteria, a different standard is applied to Regions than is applied to States. While Regional penalties are reviewed on the basis of conformance to the Agency's penalty policies, the States are not required to use EPA's penalty policies.

The revised Policy Framework established the basis for oversight of State penalties. The Policy Framework established that each State or delegated agency should define the anticipated use of penalties and other sanctions to address UIC violations. In addition, the approach used to calculate civil penalties should be defined. EPA expects a reasonable effort to calculate the economic benefit of noncompliance and to attempt to recoup the benefit through the penalty assessment and negotiation process.

B. Joint Enforcement Actions

Regions and States should consider joint enforcement actions where appropriate. Sharing penalties is also encouraged, however penalties may only be shared according to the October 30, 1985 guidance "Division of Penalties with State and Local Governments". This guidance states:

- The state or local government must have an independent claim under federal or state law that supports its entitlement to civil penalties.

- The state or local government must have the authority to seek civil penalties. ... it is ineligible to share in penalties beyond its statutory limit.

- The state or local government must have participated actively in prosecuting the case. For example, the state or local government must have filed compliants and pleadings,

asserted claims for penalties and been actively involved in both litigating the case and fany negotiations that took place pursuant to the enforcement action.

- For contempt actions, the state or local government must have participated in the underlying action giving reise to the contempt action, been a signatory to the underlying consent decree, participated in the contempt action by filing pleadings asserting claims for penalties, and been actively involved in both litigating the case and any negotiations connected with that proceeding.

C. Changes to Primacy Requirements

Under §1422, state enforcement must be no less stringent than those of EPA, and under §1425 the state must ensure an "effective" program. As a result of the 1986 amendments to the Safe Drinking Water Act, specific primacy requirements are being reevaluated, and the minimum required enforcement authorities are being analyzed. If additional enforcement authorities are required for primacy, this UIC Compliance Strategy will be evaluated and revised as needed, to reflect these new authorities.

VII. COMPLIANCE DATA AND TRACKING

An efficient compliance and data tracking system is the basis for an effective UIC compliance program. Violations discovered by any means must be tracked to the point of compliance and reported to the oversight agency. The size of the UIC Program (over 300,000 wells) demands an efficient compliance data tracking system. Without the rapid reporting, tracking, and resolution of violations, regulatory control and oversight is effectively undermined.

The current UIC national information base is comprised of two elements.

(1) Federal UIC Reporting System (FURS)
FURS is an inventory data base with limited information about all classes of injection wells and owner/operators; and

(2) Quarterly Reports (Form 7520)
Form 7520 privides summary information and data on inspection, violations,and enforcement response.

Currently there is no computerized national UIC data collection, tracking and reporting system for use between States, Regions and Headquarters.

Compliance data tracking systems designed by the States and Regions should track individual wells from the identification of a violation to the time that compliance has been achieved. Smooth and rapid data flow paths from the field inspectors to the State and Regional offices must be established. All compliance data tracking should be cross referenced with FURS. The specific design of a compliance data tracking system will be dependent on the size and needs of the States and Regions, however, certain minimum requirements must be met to satisfy national program information needs.

A. Maintaining an Accurate Inventory

A basic element of the UIC program is the inventory of injection wells. Information such as type, location, and operator of every injection well needs to be compiled and updated in order to establish a base for the compliance program. This information is to be stored in a national data base called FURS (Federal Underground Injection Control Reporting System).

FURS was originally designed to be used as a tool by Headquarters for program management, resource planning, and budget development. It was not designed to perform as a comprehensive inventory management system and therefore cannot be expected to substitute for such a system. UIC program States may choose to develop their own customized inventory capable of storing and processing all the basic FURS information and additional information regarding well construction, geologic, monitoring, and injected fluid data. This type of information can be useful in permit review, field activities, and report writing.

Maintaining an accurate and current inventory can only be accomplished through an effective public outreach program designed to help identify new members of the regulated community. This should be a major objective of any inventory effort (See discussion in Section II).

UIC State programs should, at a minimum, update the FURS once per year for any Class II,III, or V inventory changes (deletion, modification, addition) as required by 40 CFR §144.8 (b)(2)(i)(C). Class I and IV inventory changes should be submitted immediately.

B. EPA Quarterly Reports

The EPA has the responsibility for overseeing the implementation of the national UIC program. The principal national information base for the compliance program is the quarterly reports (Form 7520) which provides summary information on violations and enforcement response, inspections, and mechanical integrity testing of injection wells.

The data from these quarterly reports are used for a multitude of purposes including: SPMS, program and resource planning, status reporting, and program evaluation. National reports are prepared from these reports include State-specific data and are provided to EPA management, Congress, OMB, and the public. Regional Offices use these quarterly reports for oversight purposes.

C. Violation Data and Tracking

All violations and responses should be recorded and tracked until compliance is achieved or the matter is resolved. When a violation is identified, it should be categorized by type and significance. The EPA quarterly reports provide summary data on all violations which are divided into six generic types.[11] Enforcement actions are summarized on these reports also. The critical elements of these quarterly reports are the number of wells in violation, the number of wells with enforcement actions, and the number of wells returned to compliance. The States will need to track compliance on a well by well basis in order to generate this information. The Regional Offices should observe the relationships of these reporting items in their oversight activities of the primacy States.

At a minimum, the violation data tracking system should be capable of generating the following products for reporting and oversight purposes:

- Well class and type of injectant;
- Date, type, and significance of the violation;
- FURS identification code;
- Owner/operator information;
- Types and dates of enforcement actions; and
- Well location information.

The violation types that are considered to be Significant Noncompliance (SNC) have been outlined and discussed in the December 4, 1986 memorandum from Michael B. Cook. Violations that are considered to be SNC have high priority in tracking to compliance. Summary data on SNC will be submitted on a separate report. States should closely monitor all SNC until returned to compliance and Regional Offices should use the SNC summary reports to inquire further for information about each individual SNC.

In the event that a SNC has not been returned to compliance or addressed with a formal enforcement action in

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11. Refer to 7520-2A Compliance Evaluation in UIC Guidance #53.

two consecutive quarters, well specific information on the SNC will be required on the "exceptions list".[12] The EPA may initiate independent enforcement action in a primacy State against the owner/operators of wells found on the exceptions list after notice to the owner/operator and State and after failure by the State to take appropriate enforcement action.

D. Administrative Order Tracking

The 1986 Amendments to the Safe Drinking Water Act has provided EPA with the authority to issue Administrative Orders (AO). Both primacy States with AO authority and the EPA should closely track the AO issuance process and compliance with final AOs including the date of issuance, the effective date, any milestones associated with the operator achieving compliance and the date(s) compliance with the order requirement(s) is achieved. The summary reports only provide information about the number of AOs initiated but a national tracking system of enforcement responses may be developed in the future.

E. Inspection Data and Tracking

The quarterly reports require summary data on the number of inspections and the number of wells inspected. States and Regions should maintain a system which will track well inspections and generate information on violations found and how the violations are addressed.

Information input into the inspection tracking system should include inspection date, well location, owner/operator information, and FURS identification code. This information can then be used to generate the following products:

- Number of inspections (per quarter); and
- Number of wells inspected (per quarter).

These products can be used to manage field priorities, assure that committments in the National Strategic Planning and Management System (SPMS) are met and complete the required quarterly reporting forms.

F. Mechanical Integrity Test Data and Tracking

Summary data on the testing of mechanical integrity of wells is to be reported quarterly. States and Regions should maintain a MIT data tracking system which will be capable of tracking the MI status of all well in the program.

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12. Refer to 7520-4 in UIC Guidance #53.

Data input into this system should include well information (class, injectant location), owner/operator information, date of the most recent MIT, witnessing information, pass/fail details, and remedial action taken (if any). These data can be used to produce the following items:

- Wells needing a MIT by a given date (to comply with the 5 year MIT cycle for all wells);
- Wells tested for MI during any timeframe;
- Percent of MITs witnessed during any timeframe; and
- Percentage of MITs witnessed and not witnessed for wells that failed or passed during any timeframe.

G. National UIC Compliance Data Tracking System

As previously mentioned, there is no national data management/collection system designed to create a compliance information link between the States, the Regions and Headquarters. However, in the near future Headquarters expects to develop a comprehensive automatic data processing system for the purpose of handling compliance, tracking, and reporting data nationwide.

At such time as this system is developed, training programs designed to demostrate the operation of the system will be established and presented to the Regions/States.

VIII. COORDINATION OF THE UIC PROGRAM WITH OTHER FEDERAL/STATE REGULATORY PROGRAMS

A. Objective and Purpose

The objective of this section is to identify the areas of coordination between the UIC program and other Federal/State programs dealing with ground water, the methods to ensure coordination and the means by which coordination can be initiated and implemented.

B. Inter and Intra Program Coordination

There are three major Federal programs which may be directly or indirectly affected by the UIC program. These programs are related to the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Clean Water Act (CWA). To a lesser extent, the UIC program may require coordination under programs concerned with the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). States have similar coordination requirements within the primacy Agency and with other State Agencies such as where ground water responsibilities are divided among the Health Department, Department of Natural Resources and Oil and Gas Commission.

Since the UIC program deals directly with the protection of Underground Sources of Drinking Water, all UIC facilities which are also affected by other programs that impact on ground water should be identified when issuing a UIC permit or when inspecting a UIC facility. Notice of permitting action to other agencies is required by §124.10. In addition, it is important to note that most industrial/commercial facilities regulated under the UIC program have an impact on surface water and are regulated by other authorities, mainly the CWA or State equivalent. The key to good coordination is the mechanism used to maintain information exchange between the various regulatory programs.

C. Coordination Mechanisms

Each Region has a ground water coordination office, which is under HQ's Office of Ground Water Protection. This office is charged with identifying specific ground water issues which cross regulatory boundaries, e.g. RCRA, SDWA CWA and CERCLA. It is important for the UIC Regional staff to keep these Regional ground water offices apprised of all coordination activities involving other ground water related programs.

One of the principal mechanisms used to foster program coordination is the Memorandum of Understanding (MOU). This is also descibed as a Memorandum of Interdivisional Coordination (MIC), by some Regions.

Most Regions have initiated or are intiating such MOUs or MICs directly or through their Regional Ground Water Offices. These agreement are usually between the Water Divisions and the Waste Managment Divisions. The purpose of such documents is to track particular ground water issues and coordinate ground water program management. States may wish to adopt similar coordination mechanisms.

D. Coordination Issues

The dominant coordination effort confronting the UIC program relates to permitting Class I hazardous waste wells. RCRA has authority over surface disposal of hazardous wastes while the UIC program is responsible for disposal through deep wells. The issue of a RCRA facility with a hazardous waste injection well must be thoroughly examined from all its regulatory aspects. It is very important for the RCRA group to identify any injection facility for implementation under UIC.

Since each Region regulates various classes of wells, some issues have confronted only some of the Regions. At the present time, Region IV has developed an effective coordinative mechanism relating NPDES to Class II wells and the discharge of brine to blow boxes or brine pits. The ultimate discharge

may have a major effect on surface water quality. It is important to identify all surface water contamination to those programs which regulate the discharge to surface water.

Another example exists in Puerto Rico where there is a large number of sinkholes into which wastewater is being discharged. It was determined that these sinkholes cannot be regulated under the SDWA because they do not meet the definition of an injection well, but may be eligible for regulation under the Clean Water Act. Whenever any new incidents of such possible contamination occurs, it is the responsibility of the UIC staff to identify this information and pass it on to the CWA regulators.

Finally, there is a Section of CERCLA which identifies a Sole source Aquifer (Rockaway River Basin Area) location in northern New Jersey where no injection activity of any sort is permitted that could possibly contaminate ground water. New Jersey is the only area identified as such, thus the coordination mechanism between the programs is clearly delineated with respect to that area only.

The issues of coordination of compliance and inspection with respect to Federal facilties is another major issue which must be considered. At the present time, final Agency guidance is being developed and should be issued within this year.

With respect to the Class V analysis that is being conducted in Region II, the issue of possible Class IV hazardous wastes wells has arisen. In pursuing gasoline service stations under the Class V program, a sampling program has indicated that possible hazardous wastes may indeed be generated and ultimately be disposed of through a dry well and directly into a USDW.

E. Development of a Memorandum of Understanding (MOU)

The UIC-cross program MOU represents a formal mechanism for identifying the various joint regulatory commitments of the various programs.

With respect to a formal UIC-cross program MOU, the following should be addressed:

- Access to information concerning Class I hazardous waste injection wells, including inventories, ground water montoring data, etc.

- Exchange of hazardous waste facility inspection information in order to determine authority jurisdiction and enforcement actions.

- Compliance/enforcement action, including information related to any Notice of Violation, Administrative Orders, Non-Compliance reports, etc.
- Permitting, either issuance or denial and associated parameters, and any permit modifications.
- Corrective action required for injection well integrity, remedial action on contamination incidents at regulated sites which could involve on-site treatment of any wastes and the possibility of reinjection of fluids and any defined operation plan of a specific facility.
- Review of financial responsibility requirements, as identified for closure, plugging and abandonment, etc.
- Input is solicited from other programs which affect or are affected by the UIC program.
- Proper contact point or individual with other programs.
- Regular quarterly meetings if issues arise during any coordinated efforts.
- A quarterly listing of permits issued relating directly to UIC or the other programs.
- Documentation of any known Class IV wells under Regional jurisdiction.
- Any update on regulatory changes which may be issued with respect to the various programs and the effect on UIC.
- Superfund site listing provided to appropriate parties.
- Sole Source Aquifer area identification is provided to all related programs to insure that injection activity can be considered. Critical Aquifer Protection Areas and Wellhead Protection Areas should be identified as related to the appropriate facility.
- Inspections should be coordinated, where necessary, when dealing with the same facility.
- A printout of known injection wells and map indicating their location to those other programs with active involvement should be provided.
- The location of all known RCRA sites, where applicable, should be provided.
- Any related public participation mechanisms should be identified.

CLASS V INJECTION WELL TYPES RECOGNIZED AS OF SEPTEMBER 19, 1986

NEW CODE	NAME OF WELL TYPE AND DESCRIPTION
	DRAINAGE WELLS (a.k.a. DRY WELLS)
5F1	Agricultural Drainage Wells - receive irrigation tailwaters, other field drainage, animal yard, feedlot, or dairy runoff, etc.
5D2	Storm Water Drainage Wells - receive storm water runoff from paved areas, including parking lots, streets, residential subdivisions, building roofs, highways, etc.
5D3	Improved Sinkholes - receive storm water runoff from developments located in Karst topographic areas.
5D4	Industrial Drainage Wells - wells located in industrial areas which primarily receive storm water runoff but are susceptible to spills, leaks, or other chemical discharges.
	GEOTHERMAL REINJECTION WELLS
5A5	Electric Power Reinjection Wells - reinject geothermal fluids used to generate electric power - deep wells.
A6	Direct Heat Reinjection Wells - reinject geothermal fluids used to provide heat for large buildings or developments - deep wells
5A7	Heat Pump/Air Conditioning Return Flow Wells - reinject groundwater used to heat or cool a building in a heat pump system - shallow wells.
5A8	Groundwater Aquaculture Return Flow Wells - reinject groundwater or geothermal fluids used to support aquaculture.
	DOMESTIC WASTEWATER DISPOSAL WELLS
5W9	Untreated Sewage Waste Disposal Wells - receive raw sewage wastes from pumping trucks or other vehicles which collect such wastes from single or multiple sources. (No treatment).
5W10	Cesspools - including multiple dwelling, community, or regional cesspools, or other devices that receive wastes and which must have an open bottom and sometimes have perforated sides. (Must serve greater than 20 persons per day.) (Settling of solids).

CLASS V INJECTION WELL TYPES RECOGNIZED AS OF SEPTEMBER 19, 1986

NEW CODE	NAME OF WELL TYPE AND DESCRIPTION
5W11	Septic Systems (Undifferentiated disposal method) - used to inject the waste or effluent from a multiple dwelling, business establishment, community, or regional business establishment septic tank. (Must serve greater than 20 persons per day.) (Primary Treatment)
5W12	Domestic Wastewater Treatment Plant Effluent Disposal Wells - dispose of treated sewage or domestic effluent from small package plants up to large municipal treatment plants. (Secondary or further treatment)
	MINERAL AND FOSSIL FUEL RECOVERY RELATED WELLS
5X13	Mining, Sand, or Other Backfill Wells - used to inject a mixture of water and sand, mill tailings and other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not. Also includes special wells used to control mine fires and acid mine drainage wells.
5X14	Solution Mining Wells - used for in-situ solution mining in conventional mines, such as stopes leaching.
5X15	In-situ Fossil Fuel Recovery Wells - used for in-situ recovery of coal, lignite, oil shale, and tar sands.
5X16	Spent-Brine Return Flow Wells - used to reinject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts.
	OIL FIELD PRODUCTION WASTE DISPOSAL WELLS
5X17	Air Scrubber Waste Disposal Wells - injection wastes from air scrubbers used to remove sulfur from crude oil which is burned in steam generation for thermal oil recovery projects. (If injection is used directly for enhanced recovery and not just disposal it is a Class II well.)
5X18	Water Softener Regeneration Brine Disposal Wells - inject regeneration wastes from water softeners which are used to improve the quality of brines used for enhanced recovery. (If injection is used directly for enhanced recovery and not just disposal it is a Class II well.)

CLASS V INJECTION WELL TYPES RECOGNIZED AS OF SEPTEMBER 19, 1986

NEW CODE	NAME OF WELL TYPE AND DESCRIPTION
	INDUSTRIAL/COMMERCIAL/UTILITY DISPOSAL WELLS
5A19	Cooling Water Return Flow Wells - used to inject water which was used in a cooling process, both open and closed loop processes.
5W20	Industrial Process Water and Waste Disposal Wells - used to dispose of a wide variety of wastes and wastewaters from industrial, commercial, or utility processes. Industries include refineries, chemical plants smelters, pharmaceutical plants, laundromats and dry cleaners, tanneries, carwashes, laboratories, etc. Industry and waste stream must be specified (e.g. Petroleum Storage Facility - storage tank condensation water; Electric Power Generation Plant - mixed waste stream of laboratory drainage, fireside water, and boiler blowdown; Car Wash - Mixed waste stream of detergent, oil and grease, and paved area washdown; Electroplating Industry - spent solvent wastes; etc.).
	RECHARGE WELLS
5R21	Aquifer Recharge Wells - used to recharge depleted aquifers and may inject fluids from a variety of sources such as lakes, streams, domestic wastewater treatment plants, other aquifers, etc.
5B22	Saline Water Intrusion Barrier Wells - used to inject water into fresh water aquifers to prevent intrusion of salt water into fresh water aquifers.
5S23	Subsidence Control Wells - used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with overdraft of fresh water and not used for the purpose of oil or natural gas production.
	MISCELLANEOUS WELLS
5N24	Radioactive Waste Disposal Wells - all radioactive waste disposal wells other than Class IV wells.
5X25	Experimental Technology Wells - wells used in experimental or unproven technologies such as pilot scale in-situ solution mining wells in previously unmined areas.